

**PATENT** Attorney Docket No.: AIC-00902

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Robert M. Watson, et al.

Serial No.: 09/882,912

Filed: June 15, 2001

**BIOCHIP DETECTION SYSTEM** For:

Group Art Unit: 1743

Examiner:

SEP 28 2007 INFORMATION DISCLOSURE STATEMENT

260 Sheridan Avenue, Suite 420 Palo Alto, California 94306

(650)833-0160

**Assistant Commissioner for Patents** Washington, D.C. 20231

Sir:

The citations listed below, copies attached, may be material to the examination of the above-identified application, and are therefore submitted in compliance with the duty of disclosure defined in 37 C.F.R. §§ 1.56 and 1.97. The Examiner is requested to make these citations of official record in this application.

Applicant has become aware of the following printed publication which may be material to the examination of this application:

- U.S. Patent No. US 6,271,042 B1;
- U.S. Patent No. 6,087,102;
- U.S. Patent No. 5,744,305;
- U.S. Patent No. 5,736,333;
- U.S. Patent No. 5,736,257;
- U.S. Patent No. 5,720,928;
- U.S. Patent No. 5,720,923;
- U.S. Patent No. 5,707,797;
- U.S. Patent No. 5,690,894;
- U.S. Patent No. 5,653,939;
- U.S. Patent No. 5,645,801;
- U.S. Patent No. 5,645,114;

JERTIFICATE OF MAILING (37 CFR § 1.8(a))

hereby certify that this paper (along with any referred to as being attached or enclosed) is being deposited with the U.S. Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to the: Assistant Commissioner for Patents, Washington D.C. 20231

HAVERSTOCK & OWENS LLP.

- 1 -



## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

| n re Application of:          | ) Group Art Unit: 1743                                |
|-------------------------------|---|
| Robert M. Watson, et al.      | ) Examiner:   |
| Serial No.: 09/882,912        | ) <u>INFORMATION DISCLOSURE</u><br>) <u>STATEMENT</u> |
| Filed: June 15, 2001          | ) 260 Sheridan Avenue, Suite 420                      |
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- U.S. Patent No. 5,645,801;
   U.S. Patent No. 5,645,114;

- U.S. Patent No. 5,639,428;
- U.S. Patent No. 5,635,402;
- U.S. Patent No. 5,633,365;
- U.S. Patent No. 5,632,957;
- U.S. Patent No. 5,631,734;
- U.S. Patent No. 5,605,662;
- U.S. Patent No. 5,597,694;
- U.S. Patent No. 5,593,839;
- U.S. Patent No. 5,585,639;
- U.S. Patent No. 5,571,639;
- U.S. Patent No. 5,563,033;
- U.S. Patent No. 5,547,839;
- U.S. Patent No. 5,545,531;
- U.S. Patent No. 5,541,113;
- U.S. Patent No. 5,529,756;
- U.S. Patent No. 5,522,272;
- U.S. Patent No. 5,512,490;
- U.S. Patent No. 5,510,270;
- U.S. Patent No. 5,472,672;
- U.S. Patent No. 5,468,606;
- U.S. Patent No. 5,453,247;
- U.S. Patent No. 5,427,930;
- U.S. Patent No. 5,395,594;
- U.S. Patent No. 5,356,776;
- U.S. Patent No. 5,324,633;
- U.S. Patent No. 5,324,483;
- U.S. Patent No. 5,297,288;
- U.S. Patent No. 5,262,530;
- U.S. Patent No. 5,239,484;
- U.S. Patent No. 5,192,980;
- U.S. Patent No. 5,132,418;
- U.S. Patent No. 5,112,736;
- U.S. Patent No. 5,096,807;

- U.S. Patent No. 5,093,268;
- U.S. Patent No. 5,091,652;
- U.S. Patent No. 5,053,454;
- U.S. Patent No. 5,047,524;
- U.S. Patent No. 4,816,513;
- U.S. Patent No. 4,537,861;
- U.S. Patent No. 4,458,066;
- U.S. Patent No. 4,415,732;
- European Publication No. EP 0 640 828 A1:
- PCT Publication No. WO 99/27140;
- PCT Publication No. WO 99/00520;
- PCT Publication No. WO 97/45730;
- PCT Publication No. WO 97/12030;
- PCT Publication No. WO 96/27025;
- PCT Publication No. WO 01/27599 A1;
- PCT Publication No. WO 00/79326 A1;
- PCT Publication No. WO 00/67062;
- PCT Publication No. WO 00/49397;
- L.E. Sindelar and J.M. Jaklevic, "High-Throughput DNA Synthesis in a Multichannel Format," Human Genome Center and Engineering Research and Development Department, Engineering Division, Lawrence Berkeley Laboratory, University of California, Berkeley, California 94720, pages 1 to 8;
- Robert L. Letsinger and V. Mahadevan, "Stepwise Synthesis of Oligodeoxyribonucleotides on an Insoluble Polymer Support," J Am Chem Soc, Vol. 88:22, pages 5319-5324, November 20, 1966;
- "Fast Forward; Genome," Stephen S. Hall, January 18, 1998, The New York Times Archives;
- "Multiplexed Biochemical Assays with Biological Chips," Stephen Fodor et al.,
   Nature 364; pages 555-556, 1993;
- "Product Information" Genomic Solutions GenTAC Genmics, pg. 1 of 1,
   September 12, 2001; and
- March Schena, et al., "Microarrays: Biotechnology's Discovery Platform for Functional Genomics" Vol. 16, pgs. 301-306, July 1998.

This Information Disclosure Statement under 37 C.F.R. §§ 1.56 and 1.97 is not to be construed as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that anyone or more of these citations constitutes prior art.

Respectfully submitted,
HAVERSTOCK & OWENS LLP

Dated: 9 - (9 - 0)

Thomas B. Haverstock Reg. No.: 32,571

Attorneys for Applicants

SEP 2 7' 2001 FORM PTO-1449 (Modified)

U.S. Department of Commerce Patent and Trademark Office

Attorney Docket No.: AIC-00902

Serial No.: 09/882,912

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (MADISOVERAL Sheets If Necessary)

Applicant: Robert M. Watson Jr., et al.

Filing Date: June 15, 2001

Group Art Unit: 1743

| (£7 CFR § 1.98(b)) | Filing |
|--------------------|--------|
| ,                  |        |

| Examiner<br>Initials | Serial / Patent Number Issue Date |                 | Issue Date | Applicant / Patentee | Class | Subclass | Filing Date |
|----------------------|-----------------------------------|-----------------|------------|----------------------|-------|----------|-------------|
|                      | AA                                | US 6,271,042 B1 | 08/07/01   | Watson, Jr. et al.   | 436   | 172      | 08/26/98    |
|                      | AB                                | 6,087,102       | 07/11/00   | Chenchik et al.      | 435   | 6        | 01/07/98    |
|                      | AC                                | 5,744,305       | 04/28/98   | Fodor et al.         | 435   | 6        | 06/06/95    |
|                      | AD                                | 5,736,333       | 04/07/98   | Livak et al.         | 435   | 6        | 06/04/96    |
|                      | AE                                | 5,736,257       | 04/07/98   | Conrad               | 428   | 474.4    | 04/25/95    |
| ·                    | AF                                | 5,720,928       | 02/24/98   | Schwartz             | 422   | 186      | 04/03/95    |
|                      | AG                                | 5,720,923       | 02/24/98   | Haff et al.          | 422   | 68.1     | 08/31/94    |
|                      | AH                                | 5,707,797       | 01/13/98   | Windle               | 435   | 6        | 06/23/94    |
|                      | Al                                | 5,690,894       | 11/25/97   | Pinkel et al.        | 422   | 68.1     | 05/23/95    |
|                      | AJ                                | 5,653,939       | 08/05/97   | Hollis et al.        | 422   | 50       | 08/07/95    |
|                      | AK                                | 5,645,801       | 07/08/97   | Bouma et al.         | 422   | 68.1     | 08/18/95    |
|                      | AL                                | 5,645,114       | 07/08/97   | Bogen et al.         | 141   | 145      | 05/31/94    |
|                      | AM                                | 5,639,428       | 06/17/97   | Cottingham           | 422   | 112      | 07/19/94    |
|                      | AN                                | 5,635,402       | 06/03/97   | Alfano et al.        | 436   | 63       | 04/29/94    |
|                      | AO                                | 5,633,365       | 05/27/97   | Stokke et al.        | 536   | 24.31    | 04/28/95    |
|                      | AP                                | 5,632,957       | 05/27/97   | Heller et al.        | 422   | 68.1     | 09/09/94    |
| -                    | AQ                                | 5,631,734       | 05/20/97   | Stern et al.         | 356   | 317      | 02/10/94    |
| ·                    | AR                                | 5,605,662       | 02/25/97   | Heller et al.        | 422   | 68.1     | 11/01/93    |
|                      | AS                                | 5,597,694       | 01/28/97   | Munroe et al.        | 435   | 6        | 10/07/93    |
|                      | AT                                | 5,593,839       | 01/14/97   | Hubbell et al.       | 435   | 6        | 06/02/95    |
|                      | AU                                | 5,585,639       | 12/17/96   | Dorsel et al.        | 250   | 458.1    | 07/27/95    |
|                      | AV                                | 5,571,639       | 11/05/96   | Hubbell et al.       | 430   | 5        | 05/24/94    |
|                      | AW                                | 5,563,033       | 10/08/96   | Lawrence et al.      | 435   | 6        | 02/26/93    |
|                      | AX                                | 5,547,839       | 08/20/96   | Dower et al.         | 435   | 6        | 12/06/90    |
|                      | AY                                | 5,545,531       | 08/13/96   | Rava et al.          | 435   | 6        | 06/07/95    |
|                      | AZ                                | 5,541,113       | 07/30/96   | Siddigi et al.       | 436   | 56       | 09/22/93    |
|                      | BA                                | 5,529,756       | 06/25/96   | Brennan              | 422   | 131      | 07/13/95    |
|                      | BB                                | 5,522,272       | 06/04/96   | Vecere et al.        | 73    | 864.62   | 05/17/95    |
|                      | BC                                | 5,512,490       | 04/30/96   | Walt et al.          | 436   | 171      | 08/11/94    |
|                      | BD                                | 5,510,270       | 04/23/96   | Fodor et al.         | 436   | 518      | 09/30/92    |
|                      | BE                                | 5,472,672       | 12/05/95   | Brennan              | 422   | 131      | 10/22/93    |
|                      | BF                                | 5,468,606       | 11/21/95   | Bogart et al.        | 435   | 5        | 07/31/92    |
|                      | BG                                | 5,453,247       | 09/26/95   | Beavis et al.        | 422   | 68.1     | 11/23/93    |
|                      | ВН                                | 5,427,930       | 06/27/95   | Birkenmeyer et al.   | 435   | 91.52    | 06/28/91    |
| 9                    | ві                                | 5,395,594       | 03/07/95   | Nokihara et al.      | 422   | 135      | 08/24/92    |

**EXAMINER:** 

Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

F DRM PTO-1449 (Modified) U.S. Department of Co Patent and Trademark ( INFORMATION DISCLOSURE STATEMENT BY APPLICANT U.S. Department of Co Patent and Trademark ( INFORMATION DISCLOSURE STATEMENT BY APPLICANT U.S. Department of Co Patent and Trademark (

U.S. Department of Commerce Patent and Trademark Office

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Applicant: Robert M. Watson Jr., et al.

| 7 CFR § 1.9 | § 1.98(b))            |                          |                  |   | Filing Date: June 15, 2001 Group Art Unit: 1743 |              |          |  |           |  |
|-------------|-----------------------|--------------------------|------------------|---|---|--------------|----------|--|-----------|--|
| <u> </u>    |                       |                          |                  | U.S. PATENT DOC   | UMENTS  |              |          | ·  |           |  |
| ·           | BJ 5,356,776 10/18/94 |                          |                  | Kam   | bara et al.                                     | 435          | 6        | 09/  | <u> </u>  |  |
| ·           | BK                    | 5,324,633                | 06/28/94         | Foo   | dor et al.                                      | 435          | 6        | 09/09/92                                     |           |  |
|             | BL                    | 5,324,483                | 06/28/94         | Со  | dy et al.                                       | 422          | 131      |  | 02/93     |  |
|             | BM                    | 5,297,288                | 03/22/94         | Hemm  | ninger et al.                                   | 395          | 700      |  |           |  |
|             | BN                    | 5,262,530                | 11/16/93         |   | rus et al.                                      | 536          | 25.31    | 06/10/92<br>07/27/90<br>10/13/92<br>06/26/91 |           |  |
|             | ВО                    | 5,239,484                | 08/24/93         | Haya  | ashi et al.                                     | 364          | 500      |  |           |  |
|             | BP                    | 5,192,980                | 03/09/93         |   | on et al.                                       | 356          | 326      |  |           |  |
|             | BQ                    | 5,132,418                | 07/21/92         |   | hers et al.                                     | 536          | 27       |  |           |  |
|             | BR                    | 5,112,736                | 05/12/92         |   | well et al.                                     | 435          |          |  | 5,091,652 |  |
|             | BS                    | 5,096,807                | 03/17/92         |   | aback   | 435          | 6        | 12/01/89                                     |           |  |
|             | BT                    | 5,093,268                | 03/03/92         |   |   | 436          | 6        |  |           |  |
|             | BU                    | 5,091,652                | 02/25/92         |   | Leventis et al.  Mathies et al.                 |              | 172      | 01/28/91                                     |           |  |
|             | BV                    | 5,053,454                | 10/01/91         | 0/01/01 Z 11  |   | 458.1        |          |  |           |  |
|             | BW                    | 5,047,524                | 09/10/91         |   | us et al.                                       | 525 54.      |          | 02/15/89                                     |           |  |
|             | BX                    | 4,816,513                | 03/28/89         | Bridgham et al.         525         54.11           Elings et al.         436         518 |   |              | 12/21/88 |  |           |  |
|             | BY                    | 4,537,861                | 08/27/85         |   |   | 05/22/87     |          |  |           |  |
|             | BZ                    | 4,458,066                | 07/03/84         |   |   |              |          | 02/03/8                                      |           |  |
|             | CA                    | 4,415,732                | 11/15/83         |   | iers et al.                                     | 536          | 27       | 03/24/81                                     |           |  |
|             |                       | F                        | OREIGN PATENTS O |   |   | 536          | 27       | 03/2   | 7/81      |  |
|             |                       |                          |                  | ODDISIND FOR  | EIGHTATENT AFFI                                 | LICATIONS    | <u> </u> | <u> </u>                                     | ·         |  |
|             |                       | Document<br>Number       | Publication Date | Country / I   | Patent Office                                   | Class        | Subclass | Trans  | latio<br> |  |
|             | СВ                    | EP 0 640 828 A1          | 03/01/95         | r   | <br>EP  | COLV         |          | Yes  | 1         |  |
|             | CC                    | WO 99/27140              | 06/03/99         |   | VO  | G01N         | 21/64    |  | _         |  |
|             | CD                    | WO 99/00520              | 01/07/99         |   |   | C12Q         | 1/68     |  |           |  |
|             | CE                    | WO 97/45730              | 12/04/97         |   | <u>/0</u>                                       | C12Q         | 1/68     |  |           |  |
|             | CF                    | WO 97/12030              | 04/03/97         |   | /0  | G01N         | 33/50    |  |           |  |
|             | CG                    | WO 96/27025              | 09/06/96         | WO  |   | C12M<br>C12Q | 1/40     | <u> </u>                                     |           |  |
|             | СН                    | 03/00/70                 |                  |   | WO  |              | 1/68     |  | X         |  |
|             | CI                    | WO 00/79326 A1           | 12/28/00         |   | <u>/0</u>                                       | G01N         | 21/64    |  |           |  |
|             | CJ                    | WO 00/67062              | 11/09/00         |   | 0   | G01N         | 21/64    |  |           |  |
|             | СК                    | WO 00/49397 08/24/00     |                  |   | 0   | G02B         | 26/08    |  |           |  |
| iner:       |                       | 0 00/4/3//               | 00/24/00         |   | 0   | G01N         | 27/447   |  | ,         |  |
|             | <del>-</del>          | ial citation considered. |                  |   | Date Considered:                                |              |          |  |           |  |

FORM PTO-1449 (Modified) U.S. Department of Commerce Patent and Trademark Office Attorney Docket No.: AIC-00902 Serial No.: 09/882,912 INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use Several Sheets If Necessary) Applicant: Robert M. Watson Jr., et al. (37 CFR § 1.98(b)) Filing Date: June 15, 2001 Group Art Unit: 1743 OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication) L.E. Sindelar and J.M. Jaklevic, "High-Throughput DNA Synthesis in a Multichannel Format," Human Genome Center and Engineering Research and Development Department, Engineering Division, Lawrence Berkeley Laboratory, University of California, Berkeley, California 94720, pages 1 to 8. CL Robert L. Letsinger and V. Mahadevan, "Stepwise Synthesis of Oligodeoxyribonucleotides on an Insoluble Polymer Support," J Am Chem Soc, Vol. 88:22, pages 5319-5324, November 20, 1966. CM "Fast Forward; Genome," Stephen S. Hall, January 18, 1998, The New York Times Archives CN "Multiplexed Biochemical Assays with Biological Chips," Stephen Fodor et al., Nature 364; pages 555-556, 1993. CO "Product Information" Genomic Solutions - GenTAC Genmics, pg. 1 of 1, September 12, 2001. CP March Schena, et al., "Microarrays: Biotechnology's Discovery Platform for Functional Genomics" Vol. 16, pgs. 301-306, July 1998. CQ Examiner: Date Considered: **EXAMINER:** Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.